Fog on the Crystal Ball? Missing Atrial Fibrillation in Forecasting the Future of Stroke

To the Editor:

The policy statement by the American Heart Association and American Stroke Association on the future of stroke highlights not only the increasing costs of stroke but also, importantly, what might be done to reduce that burden. It makes an important contribution on many aspects of stroke. However, we found it most surprising that in an article that forecasts stroke, atrial fibrillation (AF) was mentioned only twice and was not listed as a risk factor for stroke. This is despite evidence that AF causes ≥25% of ischemic strokes, probably a gross underestimate, given the mounting evidence, suggesting that a large proportion of cryptogenic stroke is attributable to AF. Furthermore, recent work suggests that stroke incidence is in fact declining, but the proportion caused by AF is increasing, so that AF now accounts for almost one third of all strokes. It seems astonishing that in an article that forecasts stroke, atrial fibrillation was mentioned only twice and was not listed as a risk factor.

One of the major drivers in the prediction that stroke rates will rise is aging of the population although this will also have a major impact on AF. By the age of 80 years, 10% of the population will be affected by AF, with its associated high-stroke burden, so AF-attributable stroke risk will increase as the population ages.

Of even greater concern is that cardioembolic strokes from AF are generally more severe, with higher mortality and higher recurrence rates. The cost of treating severe and recurrent strokes secondary to AF is naturally going to add to the effect of stroke burden and should feature in modeling of future stroke.

The policy statement appropriately emphasizes the importance of prevention in reducing stroke burden. A two-third reduction in AF stroke risk can be achieved by anticoagulants; yet, all studies show the same depressing treatment gap, with too few eligible patients receiving anticoagulant therapy and with many of those on anticoagulants at subtherapeutic levels. Addressing this gap must become a priority for stroke prevention and feature in relevant policy statements.

Undiagnosed AF is relatively common in patients experiencing a first stroke. In the Adelaide stroke incidence study, of those with AF-related strokes, 30% had not been diagnosed with AF before stroke. We showed that opportunistic screening of those aged >65 years finds undiagnosed AF in 1.4% of the population, most asymptomatic, therefore, unlikely to attend their physician, and most with CHA2DS2VASc scores sufficiently high to warrant anticoagulation. Screening for AF has been recommended in national and continental AF guidelines, but uptake has been hampered by the lack of inexpensive screening mechanisms. New technologies, for example, iPhone-based single-lead ECG, are available and could both increase efficacy and reduce screening costs. Such devices could facilitate mass-community screening to detect this highly preventable cause of stroke, so screening and closing AF treatment gaps should become an integral part of the discussion in forecasting the future of stroke.

Disclosures

Drs Neubeck and Freedman: Investigator-initiated grants Pfizer/BMS, Boehringer Ingelheim, Bayer; Dr Freedman: Advisory Boards: Sanofi-Aventis (Dronedarone), MSD (Vernakalant), Bayer (Rivaraxoban); Travel grants/honoraria: Boehringer Ingelheim, Bayer. J. Orchard reports no conflicts.

Lis Neubeck, PhD, RN, BA Hons
Jessica Orchard, BEc, LLB, MPH
Cardiovascular Division
The George Institute for Global Health
Sydney, NSW, Australia

Saul Ben Freedman, MB, PhD
Department of Cardiology
Concord Hospital
Sydney Medical School
University of Sydney
Sydney, NSW, Australia

Fog on the Crystal Ball? Missing Atrial Fibrillation in Forecasting the Future of Stroke
Lis Neubeck, Jessica Orchard and Saul Ben Freedman

Stroke. published online September 17, 2013;
Stroke is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2013 American Heart Association, Inc. All rights reserved.
Print ISSN: 0039-2499. Online ISSN: 1524-4628

The online version of this article, along with updated information and services, is located on the
World Wide Web at:
http://stroke.ahajournals.org/content/early/2013/09/17/STROKEAHA.113.002495.citation

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published
in Stroke can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office.
Once the online version of the published article for which permission is being requested is located, click
Request Permissions in the middle column of the Web page under Services. Further information about this
process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Stroke is online at:
http://stroke.ahajournals.org//subscriptions/